New Impacts on the Moon: LRO Camera Identifies Recent Craters

- Comparison of images taken by LRO/LROC in the 4 years of operations reveal new craters
- Repeat images were taken at nearly identical illumination conditions for easy change detection
- In some cases, clusters of possible new craters are observed, suggesting a swarm of impactors
- Over 65 new craters have been found thus far in the ~1% of the Moon with repeated NAC images
- Based on the number of observed new craters, over one year ~180,000 impacts, that could be identified by LROC, are predicted to form
- These new impacts constrain the rate of small impact flux and provide new insights into the modification and erosion of the lunar surface

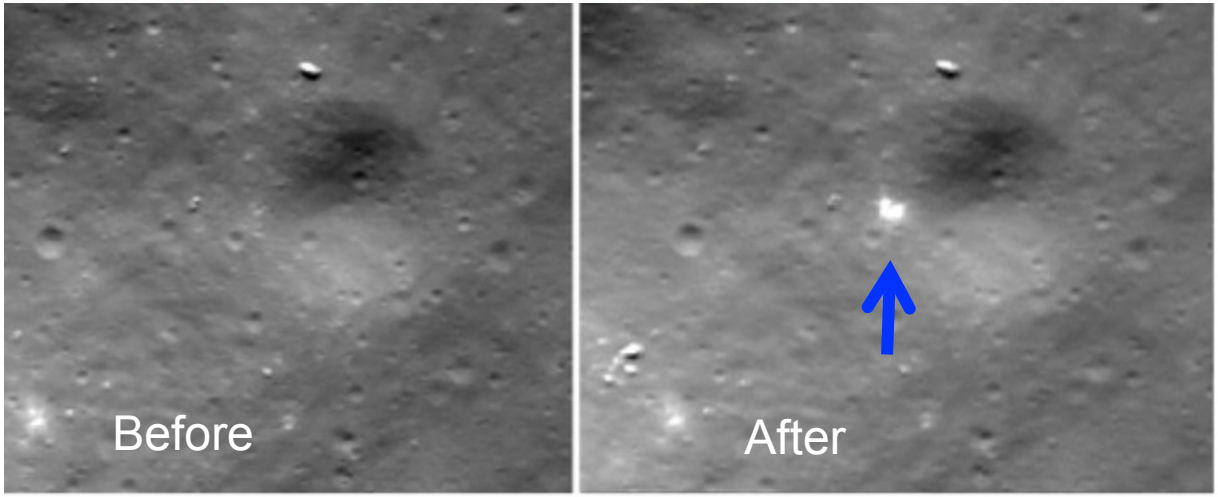
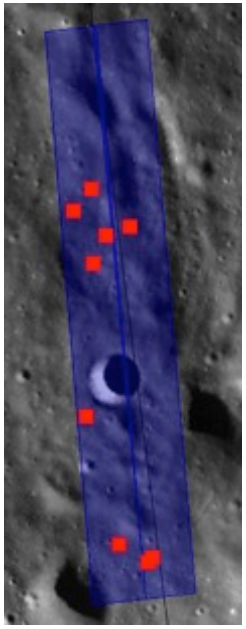


Image pair of the same area on the lunar surface reveal possible new crater ~1 meter in diameter (marked with arrow, above). In many cases, only the ejecta is observed, implying the crater is smaller than ~1.5 meters in diameter.



LROC has identified regions containing clusters of craters (new craters are marked in red, left), possibly formed as the result of a swarm of impactors. The area in blue at left shows the spatial coverage (5km x 25km) of the overlapping LROC frames.

Thompson, S. and Robinson, M. (2013) Lunar Science Forum and
LROC Featured image
(http://lroc.sese.asu.edu/news/index.php?/archives/762-March-of-Time.html)